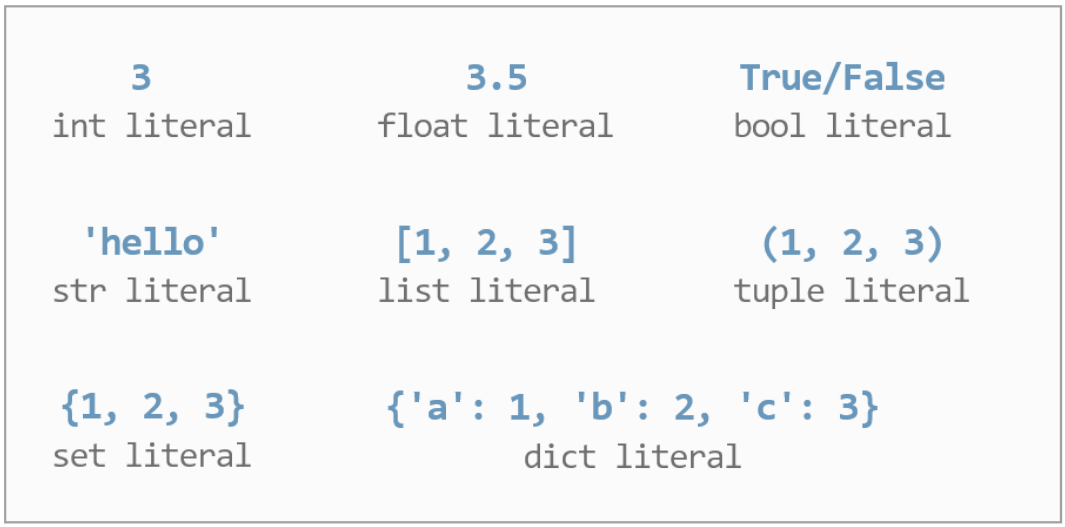
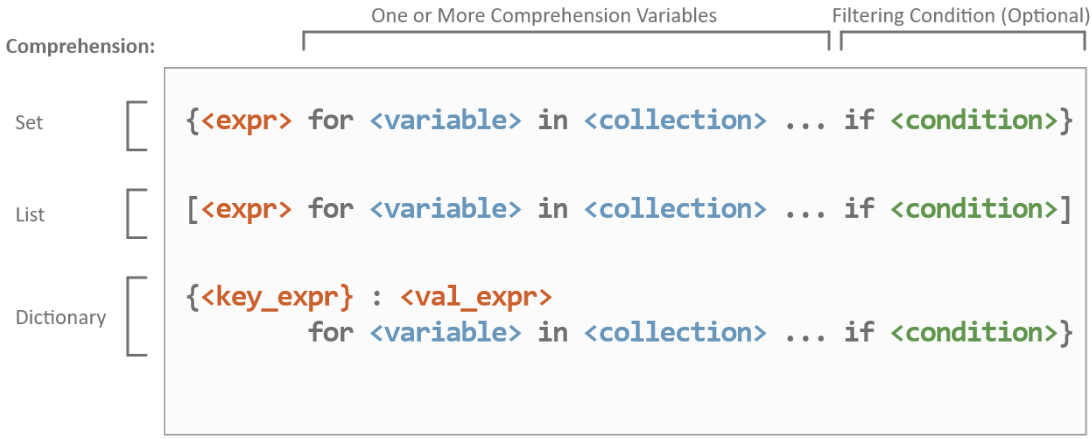
A.5 Python Syntax Diagrams

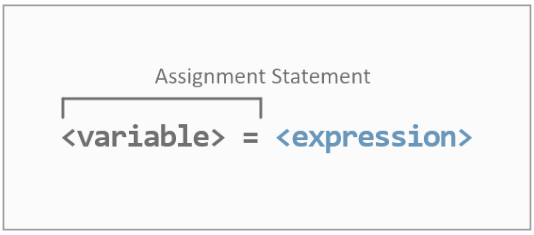
Literals



Comprehensions



Assignment statements

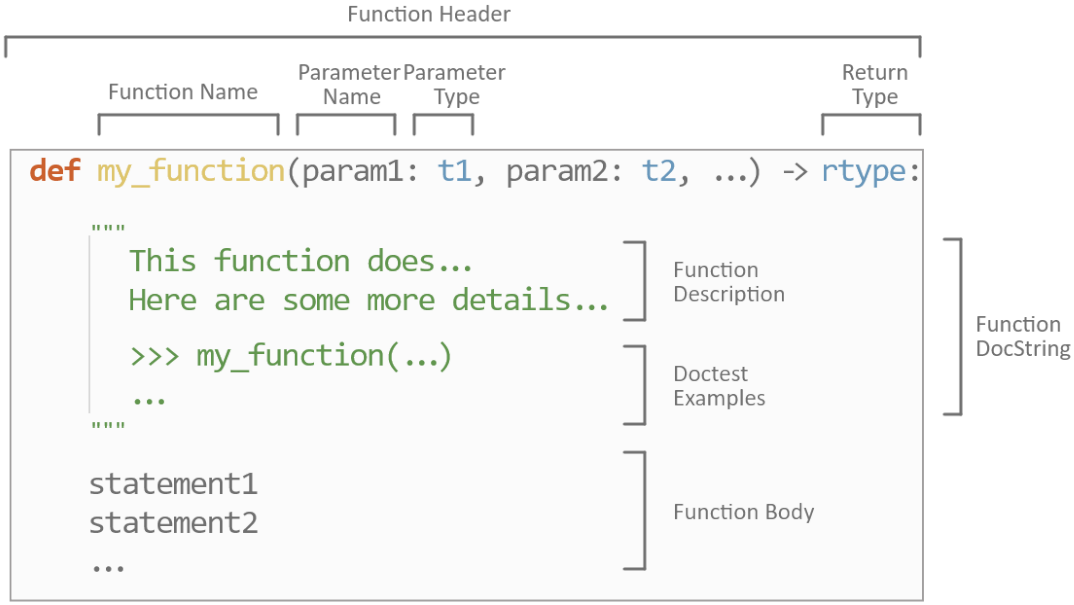


An **assignment statement** is executed in 2 steps:

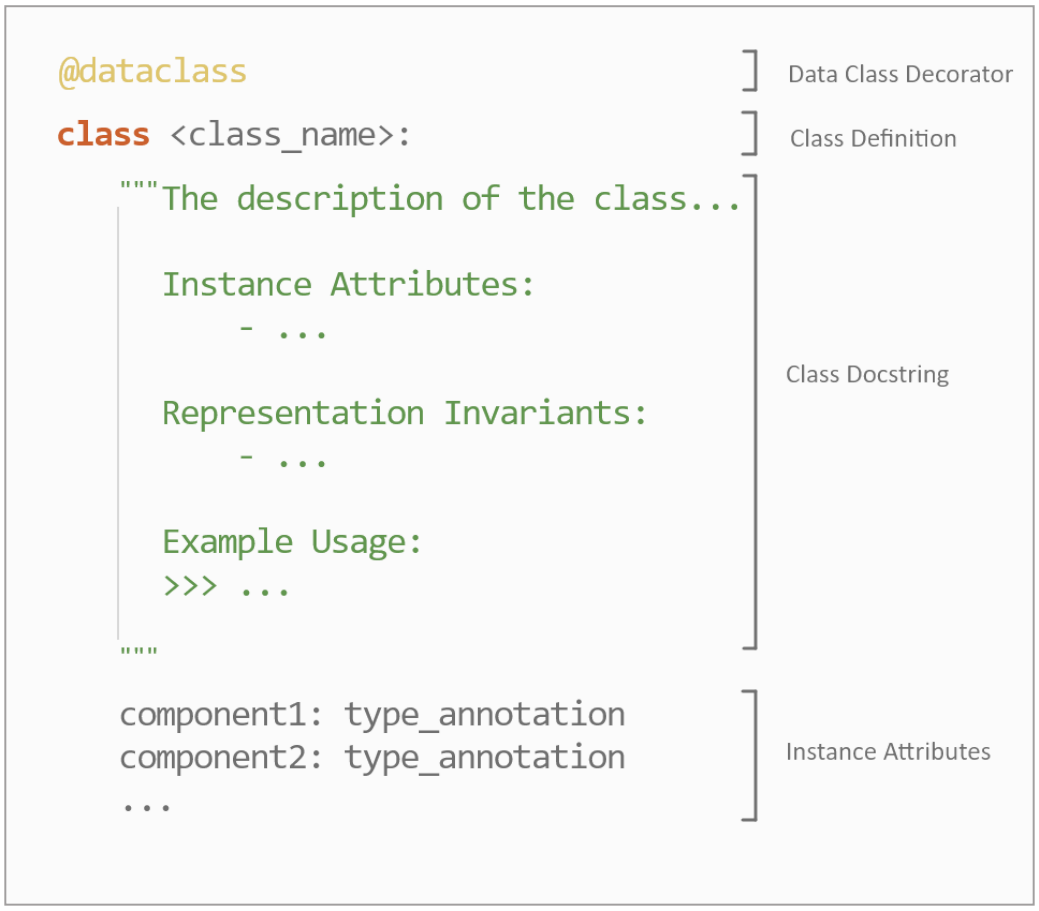
1. First, the expression on the right-hand side is evaluated, producing a value.

2. Second, that value is bound to the variable on the left-hand side.

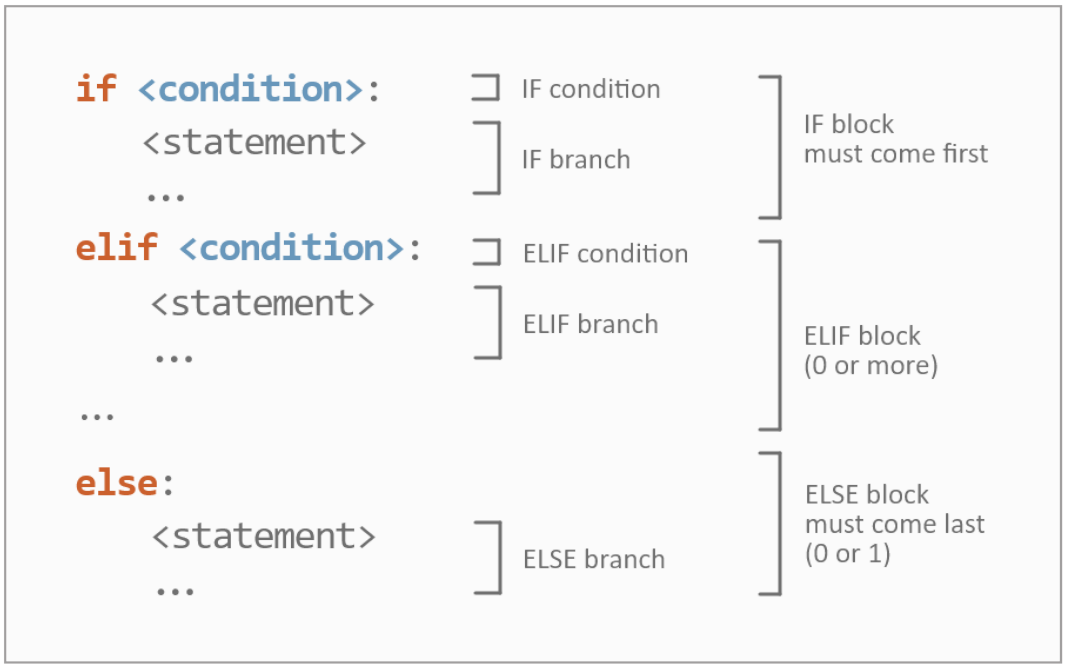
Function definitions



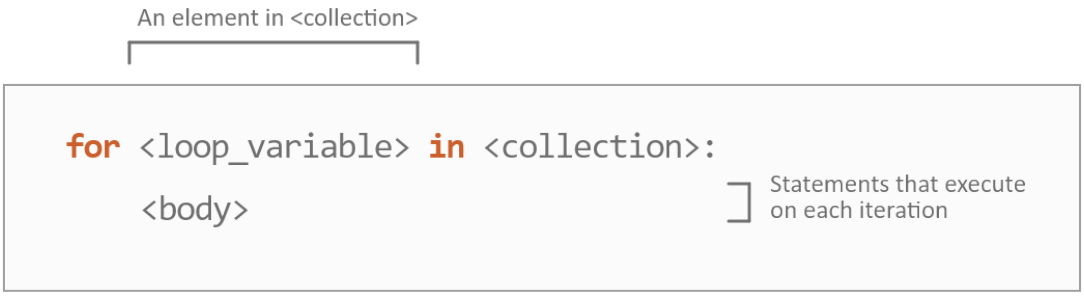
Data class definitions



If statements



For loop statements



While loop statements

```
while <condition>:
    <body>
```

Statements that execute on each iteration

Import statements

```
import <module>
from <module> import <name1>, <name2>, ...
```

Usage: <module>.<name1>

Usage: <name1>

Raise statements

```
raise <exception class>
```

This can be the name of an exception class (eg., `ValueError`) or an instance of an exception class (eg., `ValueError('value cannot be 0')`)

Try-except statements

```
try:
    <statement>
    ...
except <exception class>:
    <statement>
    ...
```

try block must come first, it includes code that can potentially raise an exception

except block (1 or more) is executed if an exception is raised in the try block